AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently amended) A method that facilitates one or more of minimum spacing and width control during an optical proximity correction operation for a mask that is used in manufacturing an integrated circuit, the method comprising:

considering a target edge of a first feature on the mask;

identifying a set of interacting edges in proximity to the target edge; and

performing the optical proximity correction operation, wherein performing the optical proximity correction operation involves applying a first edge bias to the target edge to compensate for optical effects in a resulting image of the target edge;

wherein applying the first edge bias to the target edge involves:

calculating an available bias based on minimum spacing requirements and/or minimum width requirements, and

allocating ~~an~~ the available bias between the first edge bias for the target edge and a second edge bias for at least one edge in the set of interacting edges; and

wherein the available bias is allocated based on relative weights assigned to the target edge and the second edge.

2. (Original) The method of claim 1, wherein applying the first edge bias can involve adding a positive edge bias that increases the size of the first feature or adding a negative edge bias that decreases the size of the first feature.

3. (Original) The method of claim 1,

wherein the second edge belongs to a second feature so that the distance between the target edge and the second edge defines a distance between the first feature and the second feature;

wherein applying the first edge bias to the target edge involves satisfying a minimum spacing requirement between the target edge and the second edge.

4. (Original) The method of claim 3, wherein applying the first edge bias to the target edge additionally involves satisfying a minimum width requirement between the target edge and an opposing edge of the first feature.

5. (Original) The method of claim 1, wherein the second edge is also an edge of the first feature so that a distance between the target edge and the second edge defines a distance across a gap between portions of the first feature.

6. (Original) The method of claim 1,

wherein the second edge is an opposing edge of the first feature so that a distance between the target edge and the opposing edge defines a width of the first feature; and

wherein applying the first edge bias to the target edge involves satisfying a minimum width requirement for the first feature between the target edge and the second edge.

7. (Original) The method of claim 1, wherein applying the first edge bias to the target edge involves considering an edge type of the target edge and considering an edge type of the second edge.

8. (Original) The method of claim 1, wherein allocating the available bias between the target edge and the second edge involves ensuring that the first edge bias of the target edge satisfies a minimum spacing requirement between the target edge and each edge in the set of interacting edges.

9. (Original) The method of claim 1, wherein allocating the available bias between the target edge and the second edge involves ensuring that the first edge bias of the target edge satisfies a minimum width requirement between the target edge and each edge in the set of interacting edges.

10. (Canceled).

11. (Original) The method of claim 1, wherein allocating the available bias involves iteratively updating bias allocated to the target edge and the second edge in a manner that satisfies minimum spacing requirements or minimum width requirements.

12. (Currently amended) A computer-readable storage medium storing instructions that when executed by a computer cause the computer to perform a method that facilitates one or more of minimum spacing and width control during an optical proximity correction operation for a mask that is used in manufacturing an integrated circuit, the method comprising:

considering a target edge of a first feature on the mask;

identifying a set of interacting edges in proximity to the target edge; and

performing the optical proximity correction operation, wherein performing the optical proximity correction operation involves applying a first edge bias to the target edge to compensate for optical effects in a resulting image of the target edge;

wherein applying the first edge bias to the target edge involves:

calculating an available bias based on minimum spacing requirements and/or minimum width requirements, and

allocating ~~an~~ the available bias between the first edge bias for the target edge and a second edge bias for at least one edge in the set of interacting edges; and

wherein the available bias is allocated based on relative weights assigned to the target edge and the second edge.

13. (Original) The computer-readable storage medium of claim 12, wherein applying the first edge bias can involve adding a positive edge bias that increases the size of the first feature or adding a negative edge bias that decreases the size of the first feature.

14. (Original) The computer-readable storage medium of claim 12, wherein the second edge belongs to a second feature so that the distance between the target edge and the second edge defines a distance between the first feature and the second feature;

wherein applying the first edge bias to the target edge involves satisfying a minimum spacing requirement between the target edge and the second edge.

15. (Original) The computer-readable storage medium of claim 14, wherein applying the first edge bias to the target edge additionally involves satisfying a minimum width requirement between the target edge and an opposing edge of the first feature.

16. (Original) The computer-readable storage medium of claim 12, wherein the second edge is also an edge of the first feature so that a distance

between the target edge and the second edge defines a distance across a gap between portions of the first feature.

17. (Original) The computer-readable storage medium of claim 12,

wherein the second edge is an opposing edge of the first feature so that a distance between the target edge and the opposing edge defines a width of the first feature; and

wherein applying the first edge bias to the target edge involves satisfying a minimum width requirement for the first feature between the target edge and the second edge.

18. (Original) The computer-readable storage medium of claim 12, wherein applying the first edge bias to the target edge involves considering an edge type of the target edge and considering an edge type of the second edge.

19. (Original) The computer-readable storage medium of claim 12, wherein allocating the available bias between the target edge and the second edge involves ensuring that the first edge bias of the target edge satisfies a minimum spacing requirement between the target edge and the second edge.

20. (Original) The computer-readable storage medium of claim 12, wherein allocating the available bias between the target edge and the second edge involves ensuring that the first edge bias of the target edge satisfies a minimum width requirement between the target edge and each edge in the set of interacting edges.

21. (Canceled).

22. (Original) The computer-readable storage medium of claim 12, wherein allocating the available bias involves iteratively updating bias allocated to the target edge and the second edge in a manner that satisfies minimum spacing requirements or minimum width requirements.

23. (Currently amended) An apparatus that facilitates minimum spacing or width control during an optical proximity correction operation for a mask that is used in manufacturing an integrated circuit, the apparatus comprising:

an identification mechanism that is configured to identify a set of interacting edges in proximity to a target edge of a first feature; and

an optical proximity correction mechanism that is configured to perform the optical proximity correction operation, wherein the optical proximity correction mechanism is configured to add a first edge bias to the target edge to compensate for optical effects in a resulting image of the target edge;

wherein applying the first edge bias to the target edge involves calculating an available bias based on minimum spacing requirements and/or minimum width requirements;

wherein the optical proximity correction mechanism is configured to allocate ~~an~~ the available bias between the first edge bias for the target edge and a second edge bias for at least one edge in the set of interacting edges; and

wherein the available bias is allocated based on relative weights assigned to the target edge and the second edge.

24. (Original) The apparatus of claim 23, wherein applying the first edge bias can involve adding a positive edge bias that increases the size of the first feature or adding a negative edge bias that decreases the size of the first feature.

25. (Original) The apparatus of claim 23,

wherein the second edge belongs to a second feature so that the distance between the target edge and the second edge defines a distance between the first feature and the second feature;

wherein while adding the first edge bias, the optical proximity correction mechanism is configured to satisfy a minimum spacing requirement between the target edge and the second edge.

26. (Original) The apparatus of claim 25, wherein while adding the first edge bias to the target edge, the optical proximity correction mechanism is configured to satisfy a minimum width requirement between the target edge and an opposing edge of the first feature.

27. (Original) The apparatus of claim 23, wherein the second edge is also an edge of the first feature so that a distance between the target edge and the second edge defines a distance across a gap between portions of the first feature.

28. (Original) The apparatus of claim 23,

wherein the second edge is an opposing edge of the first feature so that a distance between the target edge and the opposing edge defines a width of the first feature; and

wherein while adding the first edge bias, the optical proximity correction mechanism is configured to satisfy a minimum width requirement for the first feature between the target edge and the second edge.

29. (Original) The apparatus of claim 23, wherein while adding the first edge bias, the optical proximity correction mechanism is configured to consider an edge type of the target edge and to consider an edge type of the second edge.

30. (Original) The apparatus of claim 23, wherein while adding the first edge bias, the optical proximity correction mechanism is configured to ensure that the first edge bias of the target edge satisfies a minimum spacing requirement between the target edge and the second edge.

31. (Original) The apparatus of claim 23, wherein while adding the first edge bias, the optical proximity correction mechanism is configured to ensure that the first edge bias of the target edge satisfies a minimum width requirement between the target edge and each edge in the set of interacting edges.

32. (Canceled).

33. (Original) The apparatus of claim 23, wherein while allocating the available bias, the optical proximity correction mechanism is configured to iteratively update bias allocated to the target edge and the second edge in a manner that satisfies minimum spacing requirements or minimum width requirements.

34. (Currently amended) A means for facilitating minimum spacing or width control during an optical proximity correction operation for a mask that is used in manufacturing an integrated circuit, comprising:

an identification means that is configured to identify a set of interacting edges in proximity to the target edge of a first feature; and

an optical proximity correction means for performing the optical proximity correction operation, wherein performing the optical proximity correction operation involves applying a first edge bias to the target edge to compensate for optical effects in a resulting image of the target edge;

wherein while applying the first edge bias to the target edge, the optical proximity correction means is configured to:

calculate an available bias based on minimum spacing requirements and/or minimum width requirements, and

allocate ~~an~~ the available bias between the first edge bias for the target edge and a second edge bias for at least one edge in the set of interacting edges; and

wherein the available bias is allocated based on relative weights assigned to the target edge and the second edge.

35. (Currently amended) A method of manufacturing an integrated circuit product that facilitates minimum spacing or width control during an optical proximity correction operation for a mask used in manufacturing the integrated circuit, the method comprising:

considering a target edge of a first feature on the mask;

identifying a set of interacting edges in proximity to the target edge; and

performing the optical proximity correction operation, wherein performing the optical proximity correction operation involves applying a first edge bias to the target edge to compensate for optical effects in a resulting image of the target edge;

wherein applying the first edge bias to the target edge involves:

calculating an available bias based on minimum spacing requirements and/or minimum width requirements, and

allocating ~~an~~ the available bias between the first edge bias for the target edge and a second edge bias for at least one edge in the set of interacting edges; and

wherein the available bias is allocated based on relative weights assigned to the target edge and the second edge.

36. (Currently amended) A mask used in fabricating an integrated circuit, wherein the mask is created through a method that facilitates minimum spacing or width control during an optical an proximity correction operation for the mask, the method comprising:

considering a target edge of a first feature on the mask;

identifying a set of interacting edges in proximity to the target edge; and

performing the optical proximity correction operation, wherein performing the optical proximity correction operation involves applying a first edge bias to the target edge to compensate for optical effects in a resulting image of the target edge;

wherein applying the first edge bias to the target edge involves:

calculating an available bias based on minimum spacing requirements and/or minimum width requirements, and

allocating ~~an~~ the available bias between the first edge bias for the target edge and a second edge bias for at least one edge in the set of interacting edges; and

wherein the available bias is allocated based on relative weights assigned to the target edge and the second edge.